

Progress Report of Activities

2001

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Upper Colorado Environmental Plant Center



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What's happening at the UCEPC

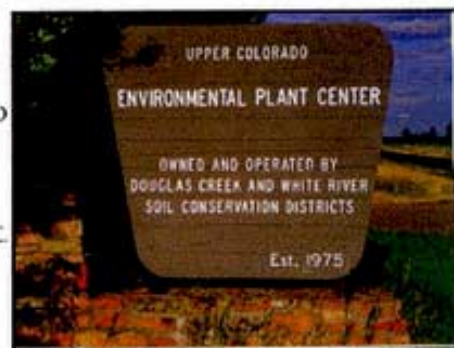
- * Fate of Bitterbrush seed at Maybell, Colorado
- * Shrub Production for Road Disturbance Restoration in Mesa Verde National Park
- * BLM Wyoming Big Sage Project Update
- * Thurbers Fescue Greenhouse project with USDA Forest Service & Ute Conservation Corps
- * Presentation on Native Forb Seed Production

The UCEPC is one of 26 Plant Material Centers nationwide in which the primary purpose is to make available quality plant materials and associated technology to the general public. Products from the Plant Center include quality native grasses, forbs and shrubs.

In order to make available quality plant materials, our advisory committee has set five long range priority areas. They are as follows:

1. Revegetation of High Altitude and Disturbed Lands
2. Increase Productivity of Rangeland and Pastures
3. Improve Water Quality
4. Wildlife Habitat Enhancement
5. Use of Native Plants in Xeriscape and Horticulture

The UCEPC continues to cooperate with federal, state, and local land owners to ensure the availability of materials with the highest quality.



The UCEPC is located approximately six miles southeast of Meeker, Colorado at an elevation of 6,500 feet. It is owned and operated by the local Soil Conservation Districts in Rio Blanco County - Douglas Creek and White River. We serve the central Rocky Mountain Region which includes parts of Utah, Wyoming, New Mexico and Colorado.



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Fate of Fall-Planted Bitterbrush Seed at Maybell Colorado

Robert Hammon* and Gary Noller

Approximately 50,000 acres of a nearly pure stand of bitterbrush, *Purshia tridentata*, near Maybell Colorado has burned in the past two decades. Attempts at reclaiming bitterbrush from seed on burned land have been largely ineffective. A research project funded by the Colorado Division of Wildlife Habitat Partnership Program was initiated in the fall of 2000 to determine the causes of seeding failures. Initial observations on seeds planted in the fall of 1999 indicated that insects such as wireworms and cutworms may have been responsible in part for seeding failures. Seeds planted November 2000 had germinated by early April 2001, with little impact from insects or other predators noted during the 2001 growing season. More than 90% of those seedlings died during the summer from drought. Seeds treated with insecticide and fungicide/rodent repellent and untreated seeds were planted in seed caches on two dates (Oct 11 and Nov 15) in 2001. Samples taken on Nov 15 and Dec 19 showed that much of the seed planted on either date had already germinated. Two fungal pathogens, *Fusarium* sp., and *Rhizoctonia* sp. were isolated from germinated seed on both sample dates. Germinated seeds from both planting dates taken from frozen soil on Dec 19 continued to grow when placed under greenhouse conditions. Further sampling in the spring of 2002 will determine if fall germination of bitterbrush seeds and the presence of fungal pathogens affects their survivability. * CSU Extension Entomologist

Bitterbrush seedlings





Blue Aster

Snowberry



Mountain Mahogany

Greenhouse Shrub Production for Roadside Disturbance in Mesa Verde National Park

Six species indigenous to the road corridor were chosen to revegetate a total of 16.5 acres in Mesa Verde National Park. Seed of the selected species had been collected and stored previously by the UCEPC making possible immediate greenhouse propagation under the National Park Service and Natural Resources Conservation Service Cooperative Interagency Agreement. Approximately 2,700 containerized plants of Utah serviceberry, Gambel oak, mountain mahogany, snowberry, four-wing saltbush and blue-leaf aster were produced in the greenhouse in 2001. The plants were delivered to the park in September for park service personnel and volunteer crews to outplant. Time released water products were applied during the site planting to one third of the plants as an experiment for future use in the intermountain west.



Gambel's Oak

Utah Serviceberry



Four-wing saltbush



Meeker BLM Entrance

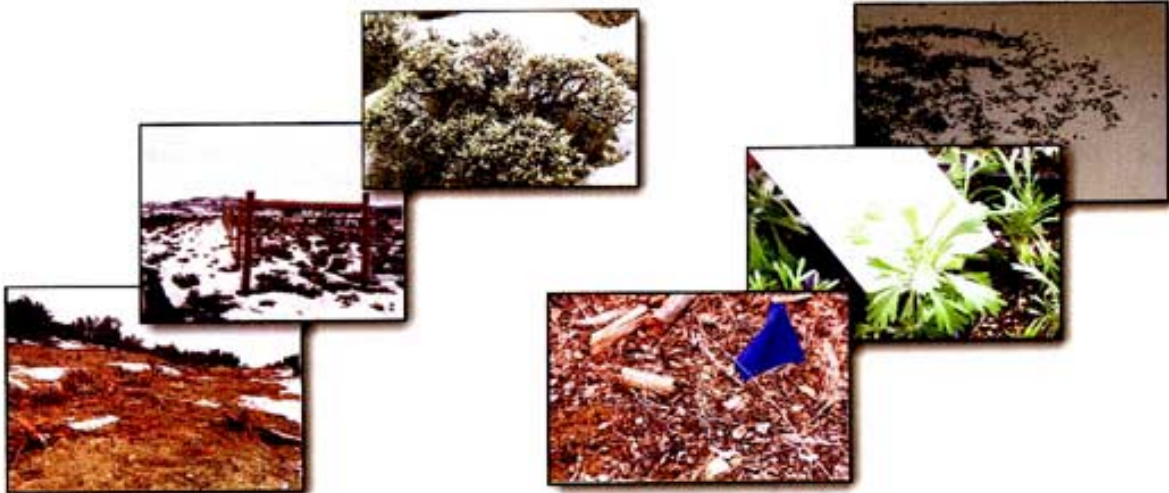
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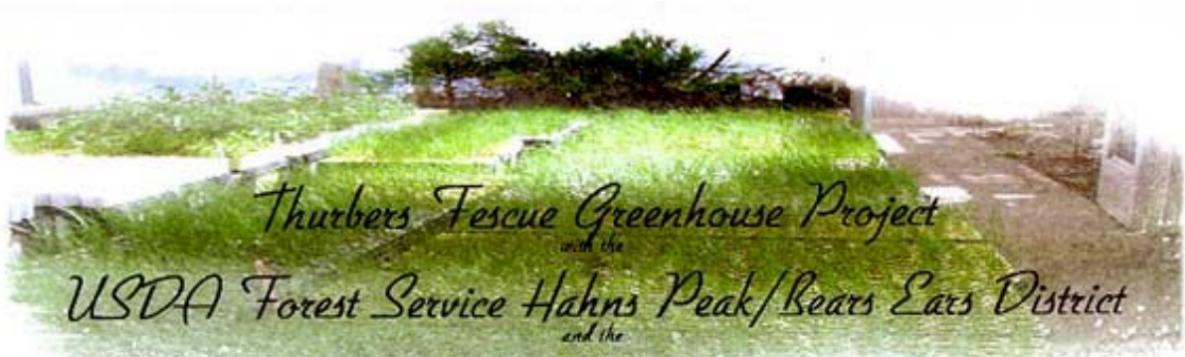


Tom Brown Inc.
Oil Pad

Wyoming Big Sagebrush Project Wildlife Habitat Enhancement Update

The Bureau of Land Management contacted the UCEPC in the fall of 2000 about a sagebrush that was heavily used in an important mule deer winter range, and this shrub's potential for use in revegetation. The area in Northwest Colorado has had several disturbances related to energy development. The Plant Center invited Dr. E. Durant McArthur from the Rocky Mountain Research Station Shrub Sciences Laboratory, an expert on sagebrush identification to visit the site and confirm the identify of the shrub, and discuss the merits of the project. The shrub was identified as Wyoming big sagebrush, an important shrub for mule deer winter range. The Plant Center worked cooperatively with the BLM to make this important plant available. Seed was collected from the site in 2000 and seedlings were grown at the Plant Center's greenhouse in 2001. We also worked with the BLM to identify an area suitable for construction of the enclosure to be used for seed collection. Tom Brown Oil and Gas Inc. funded the construction of the enclosure in 2001. 650 plants were produced in less than four months and were outplanted by BLM personnel on the Tom Brown Inc. drilling pad and pipeline disturbances. The sagebrush seedling plantings survived without supplemental watering and protection, despite being a dry year. Reports from BLM have been very positive and evaluation will continue in the Spring of 2002.





Thurbers Fescue Greenhouse Project
with the
USDA Forest Service Hahns Peak/Bears Ears District
and the
Ute Conservation Corps

Beginning in 1999, the UCEPC, plus many different resource cooperators have been involved in the Routt National Forest - California Park Ecosystem Working Group. This group was formed to develop conservation strategies and integrated management plans. The Ute Conservation Corp (UCC) was designed to reconnect the youth of the Ute tribe with their ancestral landscape while providing employment in environmental stewardship. Thurbers fescue was one of the targeted species for seed field increase at the UCEPC by the working group. The seed collection area was within California Park Special Interest Management Area. Revegetation was to take place for improving habitat for sharp-tailed and sage grouse. Seed collection efforts plus other tasks were assigned to the UCC in the fall of 2000. UCEPC Plant Propagator, Lois Dworshak was asked to provide assistance with plant identification and seed harvesting techniques. Due to a poor seed production year, collected cleaned seed amounts were limited, therefore the UCEPC greenhouse was utilized to grow 5,000 Thurbers fescue tublings. Propagation was started in May 2001, and by September 2001, the plugs were outplanted by Forest Service personnel in the 1,200 acre revegetation project at Slater Creek.



Native Forb Seed Production and Conditioning

Rodney Dunham, Farm Foreman gave a presentation at the Second Annual Native Seed Quality Workshop. At the present time the Plant Center is working with the following Forbs: Utah Sweetvetch, Yarrow, Fringed sage, Penstemon and Louisiana sage. The UCEPC uses a Hegie Combine, Flail-vac, Debearder, Hammermill, and the Carten-day disc separator to harvest and clean seed.